Alberta Traffic Safety Plan

Saving Lives on Alberta's Roads

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Executive Summary

Every year, nearly 400 people die and more than 27,000 people are injured in over 112,000 motor vehicle collisions in Alberta. These fatalities and injuries have great personal, community and societal implications, as well as a monetary cost of $4 billion to Albertans. This reality is made even more disturbing by the fact that most of these collisions are preventable.

The Alberta government is committed to reducing these numbers and improving traffic safety throughout the province. *The Alberta Traffic Safety Plan: Saving Lives on Alberta's Roads* proposes a comprehensive framework for action to reduce collisions in our province. The Traffic Safety Plan builds upon the Alberta Traffic Safety Initiative, in place since 1996, and responds to the McDermid Report, *Saving Lives on Alberta's Roads: Report and Recommendations for a Traffic Collision Strategy and Injury Reduction Strategy*, released in September 2004.

The Alberta Traffic Safety Plan is also a blueprint as the Alberta government works towards meeting targets set out in the national strategy *Canada Road Safety Vision 2010*. Put simply, the Alberta Traffic Safety Plan aims to make Alberta's roads the safest in the country.

This will be no small feat. The Traffic Safety Plan highlights some of the challenges that will need to be addressed before goals can be achieved. It also includes a number of statistics that illustrate the current state of road safety in Alberta. For example, statistics show that:

- A traffic collision occurs in Alberta every five minutes;
- On average, at least one person will be killed and 65 will be injured every day in Alberta because of motor vehicle collisions;
- Motor vehicle collisions take six times more lives than homicides, eight times more lives than AIDS, and 100 times more lives than meningitis;
- In Alberta, the overall cost of motor vehicle collisions to society is conservatively estimated to be at least $4 billion per year. That's about $12 million every single day.

This document includes strategies to address traffic safety issues in 10 targeted areas:

1. Unbelted occupants and occupant restraints
2. Impaired driving
3. Speeding
4. Intersections
5. Rural roadways
6. Commercial vehicles
7. Young drivers and riders
8. Vulnerable road users
9. High risk and medically unfit drivers
10. Aging drivers

At the heart of the plan are strategies that, over time, will make Alberta's roads safer for all users. The plan's strategies fall into eight categories:

1. Leadership and coordination
2. Communications and advocacy
3. Aboriginal traffic safety
4. Education
5. Enforcement
6. Legislation
7. Research and evaluation
8. Engineering and infrastructure

Introduction

The Alberta Traffic Safety Plan is the result of the collaborative efforts of the provincial government and non-government stakeholder organizations. It involved almost 100 working sub-committee members who have joined forces to take action on traffic safety. This plan is "made-in-Alberta", yet it's designed to reflect Alberta's contribution to national targets for reducing fatalities and serious injuries caused by motor vehicle collisions.

The Alberta Traffic Safety Plan includes discussion of the need for improved traffic safety, Alberta-specific targets that reflect national goals, challenges in developing the plan and core principles that guided the creation of the plan. This is followed by a list of the issues the plan will target and strategies to address the issues. Some of these strategies have been put into action already; others will be undertaken over time.

A review of Canadian and Alberta statistics provides significant insight in determining priority areas for the Alberta Traffic Safety Plan to address.

- 19.1 per cent of drivers involved in fatal collisions had consumed alcohol prior to the crash. Males 18 to 24 years old were more likely to have consumed alcohol prior to a casualty collision than any other age group.
- Unbelted vehicle occupants involved in collisions are three times more likely to die or suffer injury. Seat belts are the single most cost-effective life-saving device to reduce road trauma.
- 17 per cent of drivers who were killed were traveling at excessive speeds.
- 25 per cent of road user fatalities occur in intersections.
- 70 per cent of fatal crashes occur on rural roads.
- Young drivers and riders make up approximately five per cent of the licensed driver/rider population, but account for 10 per cent of deaths and 13 per cent of serious injuries.
- Aboriginals represent approximately five per cent of Alberta's population but experience nearly 16 per cent of all traffic-related fatalities.
- Only three to four per cent of drivers exhibit "high risk" driving behaviors, but account for about 12 per cent of fatalities and eight per cent of serious injuries.

As telling as these statistics are, they only show part of the story of traffic safety in Alberta. More statistics can be found throughout this plan, helping to provide context and background to the plan's development and the creation of its vision, mission and goals.

19.1 per cent of drivers involved in fatal collisions had consumed alcohol prior to the crash. Males 18 to 24 years old were more likely to have consumed alcohol prior to a casualty collision than any other age group.

Vision: **Alberta has the safest roads in Canada.**

Mission: **Saving lives on Alberta's roads.**

Goal: **Achieve a 30 per cent decrease in the average number of road users killed or seriously injured during 2008-2010, compared with average figures during 1996-2001.**

As work on this plan proceeds, the overall number of collisions is also expected to decline.

The following is a summary of specific targets the Alberta Traffic Safety Plan intends to meet:

- A **95 per cent rate** of seatbelt wearing and proper use of appropriate child restraints by all motor vehicle occupants;
- A **40 per cent decrease** in the number of fatalities or serious injuries involving unbelted occupants;
- A **40 per cent decrease** in the percentage of road users killed or seriously injured in crashes involving drinking drivers;
- A **40 per cent decrease** in the number of road users killed or seriously injured on rural roadways;
- A **20 per cent decrease** in the number of road users killed or seriously injured in speed or intersection related crashes;
- A **20 per cent decrease** in the number of road users killed or seriously injured in crashes involving commercial vehicles;
- A **20 per cent decrease** in the number of young drivers/riders (aged 16 to 19 years) killed or seriously injured in crashes;
- A **30 per cent decrease** in the number of fatalities or serious injuries involving vulnerable road users (pedestrians, motorcyclists and cyclists);
- A **20 per cent decrease** in the number of fatalities or serious injuries in crashes involving high risk drivers;
- A **decrease** in the number of fatalities and serious injuries involving aging drivers (exact number still to be determined).

Background

The Alberta Traffic Safety Initiative

The Alberta government launched the Alberta Traffic Safety Initiative in 1996 with four key components: information, awareness, education and standards and enforcement. Strategies undertaken as part of this initiative include the Alberta Occupant Restraint Program, Alberta Provincial Impaired Driving Committee, changes to the Traffic Safety Act and education awareness strategies.

The McDermid Report

In the spring of 2004, retired RCMP Assistant Commissioner Don McDermid was requested to review the state of traffic safety in Alberta. After consulting with government departments and key stakeholders, McDermid prepared the report *Saving Lives on Alberta's Roads: Report and Recommendations for a Traffic Collision Strategy and Injury Reduction Strategy.*

In September 2004, the provincial government endorsed the nine recommendations that came out of the report:

1. Establish a provincial mechanism to provide leadership, direction, coordination and evaluation of road safety initiatives in Alberta.

2. Develop and implement a comprehensive road safety plan for Alberta with clearly defined objectives, strategies and work plans tailored to meet provincial and local needs.

3. Establish a sustainable source of ongoing funding for road safety initiatives.

4. Expand research and the availability of comprehensive, timely information about road safety.

5. Establish specific targets consistent with Road Safety Vision 2010 and report regularly on progress in achieving those targets.

6. Engage Aboriginal leaders and elders in the development of targeted strategies to reduce the rates of collisions, injuries and fatalities among Aboriginal people.

7. Take advantage of advances in technology, provided the objectives are directly related to improving road safety.

8. Ensure that adequate resources are available to provide effective enforcement.

9. Undertake a thorough review of current driver education and driver examinations.

Other Provincial Initiatives

The Alberta Traffic Safety Plan is the next step in the process of following up on and addressing the specific recommendations in the McDermid report, and it is consistent with other provincial initiatives that focus on improving the health and safety of all Albertans.

- The **Healthy Alberta** framework sets outcomes, objectives and targets for government action to promote good health and prevent disease and injury, to the year 2012. The objective is for "more Albertans to take steps to prevent injury, by reducing the mortality rate due to motor vehicle collisions from 10.7 to 5 per 100,000 people."

- The **Work Safe Alberta Initiative** takes a collaborative approach to reducing workplace injuries. The plan projected that 15,000 workplace injuries could be prevented each year, with a $3.3 million per year investment.

- The November 2003 **Alberta Injury Control Strategy** indicates that injuries are the leading cause of death for Albertans aged one to 44 years, and the greatest killer of Alberta's children.

- The 2003 **Aboriginal Traffic Safety Summit Report** recommends a comprehensive series of community-based initiatives to address occupant restraints, child safety restraints, impaired driving and related "high risk" driving behavior.

The Case for Improving Traffic Safety

Alberta is part of a Canada-wide initiative to reduce traffic collisions, injuries and fatalities and achieve national targets. Our rates of fatalities and injuries per 100,000 population and per 100,000 drivers are higher than the national averages. The following 2004 chart on motor vehicle collision rates shows that, in relation to other provinces, Alberta has much work to do in the area of traffic safety.

Casualty Rates - 2004

	Per 100,000 Population		Per Billion Vehicle - Kilometres*		Per 100,000 Licensed Drivers	
	Fatalities	Injuries	Fatalities	Injuries	Fatalities	Injuries
Canada	**8.5**	**664.7**	**8.8**	**680.8**	**12.6**	**979.8**
N.L.	7.2	516.6	9.7	699.1	10.8	779.2
P.E.I.	20.3	681.1	22.6	759.5	28.8	964.6
N.S.	9.6	546.2	9.4	533.2	13.7	776.5
N.B.	9.4	562.4	9.6	572.9	13.4	800.0
Que.	8.6	740.9	9.0	778.0	13.7	1,182.9
Ont.	6.5	588.7	6.6	599.8	9.3	842.9
Man.	8.5	796.3	9.5	890.8	14.3	1,343.0
Sask.	12.7	745.2	11.0	647.1	18.8	1,107.4
Alta.	12.1	757.3	9.9	621.5	16.2	1,015.1
B.C.	10.2	694.3	12.4	842.4	15.0	1,019.2
Y.T.	16.0	679.3	9.4	397.4	21.4	907.0
N.W.T.	7.0	352.7	9.6	485.2	9.7	487.8
Nvt.	3.4	222.6	33.7	2,222.2	n.a.	n.a.

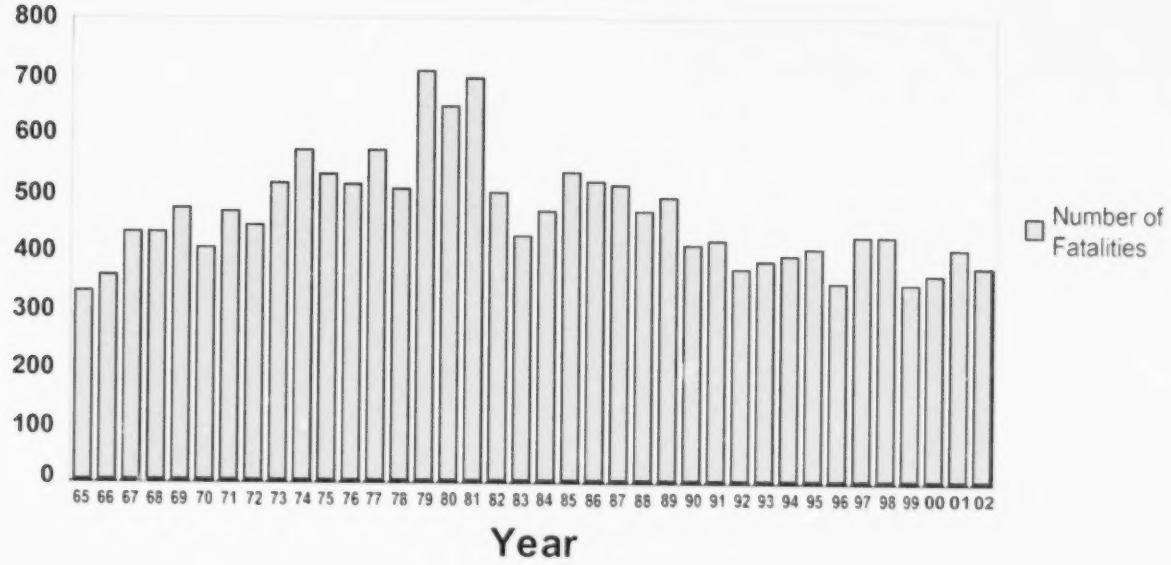
* Statistics Canada, 'Canadian Vehicle Survey', Catalogue No. 53-223-XIE.

Note: Data for Ontario are preliminary for 2004.
There is no official abbreviation for Nunavut at this time. The abbreviation used here is provisional.

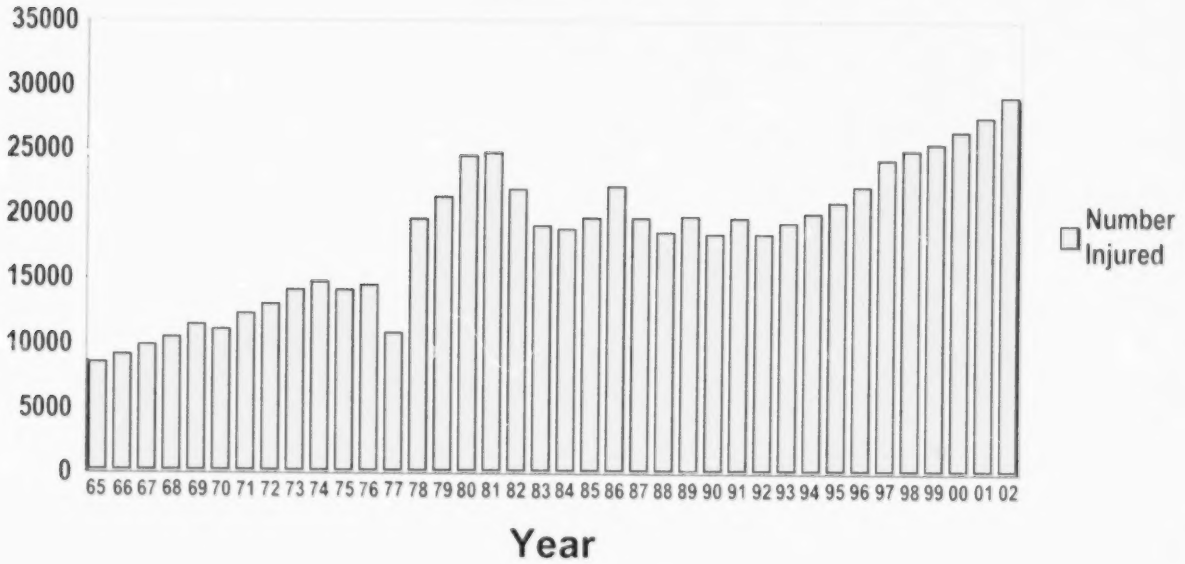
n.a. Licensed driver data is not available for Nunavut.

In terms of reducing the number of motor vehicle collisions in Alberta, while there are some positive signs, there are still far too many people killed and injured on Alberta's roads and highways. The following charts show Alberta's record of collisions that dates back to 1965 (shown in absolute numbers only).

Number of Fatalities In Alberta Traffic Collisions 1965-2002



Number Injured In Alberta Traffic Collisions 1965-2002



The following charts give a picture of motor vehicle collisions in Alberta over the five-year period of 2000 – 2004 inclusive. Again, these charts show some improvement when it comes to reducing collisions, but they also show that Alberta still has a way to go. These charts show fatality rates per billion vehicle kilometres traveled.

Health and Societal Implications

What are the health and societal costs of motor vehicle collisions in Alberta?

The overall societal costs are challenging to determine, in part because many of the impacts of motor vehicle collisions (such as pain and suffering) are difficult to estimate. Methodologies are constantly evolving, and there is no widely accepted comprehensive framework for understanding the direct and indirect costs of motor vehicle collisions.

The tangible and objective costs paid for by Albertans include at a minimum:

- emergency medical services;
- publicly funded health services (hospitalization, physician services and other services delivered by health authorities);
- private insurance plans and employer benefits;
- police and municipal services;
- workplace productivity costs (such as staff replacement);
- increased public assistance costs as a result of taxpayers being unable to work;
- legal and court costs;
- lost income and foregone taxes;
- disability and workers compensation payments;
- lost household productivity;
- property damage, including automobiles;
- automobile insurance payouts;
- other out-of-pocket costs.

Alberta's estimates for the costs of traffic collisions are based on British Columbia's widely accepted "willingness to pay model" developed in 1991. The model does not include mental health services and productivity lost by caregivers.

Using the B.C. model and the 1996 to 2001 period as a baseline, the estimated total cost of motor vehicle collisions in Alberta is **$3.9 billion per year**. The estimated cost of motor vehicle collisions that resulted in casualties is **$3.4 billion per year**.

If the Alberta Traffic Safety Plan reaches its targets, Alberta would save an estimated **$1.1 billion per year** in casualty collisions, plus $500 million in property damage. Implementing a prevention strategy in Alberta based on buckling up, driving sober, slowing down and paying attention on the roads would have significant personal and monetary savings. According to a SmartRisk 2002 study, there would be 789 fewer hospitalizations, 1,500 fewer injuries treated outside a hospital setting and about 180 fewer injuries leading to permanent disability. Albertans would save an estimated $127 million in direct and indirect health care costs annually.

Saving Money by Investing in Traffic Safety

A Global Perspective

Examples from around the world show there can be a considerable return for funds invested in plans to improve traffic safety.

- From 1994 – 1996, Peoria, Illinois saw a 21 per cent decrease in motor vehicle collisions after increasing traffic citations by 24 per cent. The city implemented a "Beyond the Ticket" approach, which took on a more comprehensive and systematic approach to enforcement. This approach also resulted in significant reductions in all other types of crime. (Alberta Motor Association)

- The state of Victoria, Australia is considered a leader in traffic safety. With annual investments in their traffic safety program of between $12 million and $20 million in the late 1980s, Victoria achieved the following results:
  - 49 per cent reduction in collisions;
  - 54 per cent reduction in fatalities;
  - 40 per cent reduction in the rate of hospitalization;
  - 36 per cent reduction in the length of hospital stays;
  - $2 billion savings in societal costs over three years (Alberta Motor Association);
  - Australia's "black spot" programs invest money to identify and improve the safety of high collision locations. These programs have saved over 20 lives per year per $100 million invested, producing average benefit/cost ratios of approximately 4:1.

- Closer to home, the Coalition of Alberta Automobile Insurers partnered with four Alberta municipalities to identify and correct "black spots", high collision locations that can be improved through engineering and increased education and enforcement. These "black spot" pilot studies introduced improvements to road design, driver education and increased enforcement and had the potential to reduce the number and severity of crashes. (Alberta Motor Association)

- The Work Safe Alberta Initiative illustrates the significant return on investment that can be achieved by taking a collaborative approach to reducing injuries. Administered by Alberta Human Resources and Employment, Work Safe is a partnership among government, industry and labour aimed at reducing the number of workplace injuries. The plan projected that 15,000 injuries could be prevented each year with a $3.3 million per year investment. In less than three years, the preliminary results were:
  - a 30 per cent reduction in the provincial injury rate
  - 12,600 fewer lost time injuries each year
  - $189 million per year in reduced safety and injury claims costs.

This represents a 57:1 benefit/cost return on investment.

Provincial Government Revenues from Traffic Safety

The Alberta government generates revenues through a variety of fines for traffic-related offences such as speeding, seat belt infractions, failing to stop for pedestrians and at stop signs and for impaired driving. The provincial government collects all traffic-related fines imposed in Alberta under the Traffic Safety Act and the Criminal Code of Canada. In most cases, fines collected are returned to municipalities. In 2003/2004, 1.67 million fines resulted in revenue of $123.4 million, of which $31.6 million was returned to the provincial government, while $91.8 million went to municipalities.

In addition to fine revenue, the province also collects a surcharge on insurance premiums. In 2004/05, the insurance premiums surcharge (three per cent of premiums) was expected to raise $118 million in revenue, which goes to the general revenues of the province. The insurance industry also contributes about $60 million toward the cost of health care services in Alberta.

Stakeholders

The Alberta Traffic Safety Plan was created with the support of stakeholders and government who contributed to the creation of this plan and continue to contribute to traffic safety in Alberta. Stakeholders include:

Aboriginal Traffic Safety Coalition
Alberta Aboriginal Affairs and Northern Development
Alberta Agriculture, Food and Rural Development
Alberta Association of Municipal Districts and Counties
Alberta Center for Injury Control and Research
Alberta Education
Alberta Finance
Alberta Gaming
Alberta Government Services
Alberta Health and Wellness
Alberta Human Resources and Employment
Alberta Infrastructure and Transportation
Alberta Justice and Attorney General
Alberta Motor Association
Alberta Motor Transport Association
Alberta Motor Vehicle Industry Council
Alberta Municipal Affairs
Alberta Roadbuilders and Heavy Construction Association
Alberta Seniors and Community Supports
Alberta Solicitor General and Public Security
Alberta Urban Municipalities Association
City of Calgary
Calgary Police Service
City of Camrose
Canadian Petroleum Safety Council
Center for Transportation Engineering and Planning (CTEP)
City of Edmonton
Edmonton Police Service
Health Canada
Insurance Bureau of Canada
Motor Dealers Association of Alberta
Mothers Against Drunk Driving
Royal Canadian Mounted Police
Strathcona County
University of Alberta
University of Calgary

Challenges in Developing the Traffic Safety Plan

Stakeholders involved in developing the Alberta Traffic Safety Plan encountered many challenges, including:

- Little public awareness of motor vehicle collisions as a significant health, financial and societal issue;
- The historically modest collaboration and communication among stakeholders, given the absence of a coordination and oversight mechanism;
- Modestly-resourced programs and services, with little designated and long-term sustained funding;
- Lack of timely, comprehensive, standardized, consistent and accurate reporting and data on the implications of motor vehicle collisions, and the incompatibility of existing information systems;
- Limited research and evaluation on the effectiveness of traffic safety interventions.

The academic literature on traffic safety issues is limited by the difficulties in determining cause and effect, differing methodologies, lack of conclusiveness, analyses confined to one aspect of a complex series of issues and inevitable demands for more research. This created challenges for stakeholders when attempting to develop evidence-based proposals and initiatives.

A 2004 Transport Canada summary of the literature dealing with causes of motor vehicle collisions offered the following comments:

"*It is far more common for a crash to result from a combination of factors, involving the interactions between driver and vehicle, and between vehicle and environment. While driver behavior can often be the most modifiable factor in any individual crash, re-engineering of the road, the environment and the vehicle often provide easier and more effective ways to reduce the risk of future collisions.*

It follows that the prevention and mitigation of traffic collisions requires a multi-disciplinary approach aimed at the human element, the vehicle and the road environment to sift out all possible causes and potential solutions..."

The Alberta Traffic Safety Plan reflects the need for a comprehensive and definitive approach to address the many causes and correlates of motor vehicle collisions.

"...re-engineering of the road, the environment and the vehicle often provide easier and more effective ways to reduce the risk of future collisions."

- *Transport Canada*

Guiding Principles

The Alberta Traffic Safety Plan was developed using the following guiding principles:

Leadership: The combined leadership, collaboration and accountability of provincial government departments and non-government traffic safety stakeholders will significantly reduce the numbers of fatalities and serious injuries and extent of property damage resulting from motor vehicle collisions.

Traffic Safety Plan Guiding Principles

- Leadership
- Building on what we know
- Comprehensive approach
- Community mobilization
- Sustainable funding
- Stakeholder involvement
- Alberta's contribution

Building on What We Know: The plan will build on the successes and accomplishments demonstrated by Alberta's Traffic Safety Initiative since 1996 (noted in the first appendix) in the areas of information and awareness, education, legislation and standards and enforcement.

Comprehensiveness: Introducing a multi-dimensional "systems approach" will enhance the safety of the road transportation system. This approach is based upon research and evidence from the traffic safety literature, best practices and theories in other jurisdictions (where evidence is lacking), behavior change principles, intelligent transportation technology, enforcement, infrastructure and engineering, communications and education.

Community mobilization: Building on the successful Alberta Occupant Restraint Program model, the plan will mobilize communities in pursuit of the goals and targets set out in the 10 target areas.

Sustainable Funding: The plan will result in a sustainable and adequate funding mechanism to successfully address the strategies and tactics that reflect Alberta's contribution to Canada's Road Safety Vision 2010.

Stakeholder Engagement: The plan will have a comprehensive education and awareness/social marketing strategy as one of its key pillars, with the support of all stakeholder organizations. It will be designed to successfully engage Albertans and stakeholder organizations as partners.

Alberta's Contribution: This plan is made in Alberta, yet will reflect Alberta's contribution to the national targets for reducing fatalities and serious injuries. Alberta is in a position to significantly contribute to meeting the national targets and to move ahead from its current low standing and take a leadership position.

Targets

1. Unbelted Occupants and Occupant Restraints

When a vehicle stops suddenly in a crash, any unrestrained articles or people continue traveling at the same speed until they hit the dashboard, windshield or another object inside the vehicle. Seat belts prevent death and serious injuries to occupants of light duty motor vehicles in potentially fatal collisions 39 to 60 per cent of the time. This varies depending on the type and size of vehicle and where the person is seated. (Alberta Center for Injury Control and Research).

According to the Alberta Motor Association "the use of a seat belt is perhaps the most effective way of reducing injury severity and likelihood of fatalities among vehicle occupants involved in a crash. In a large number of fatal crashes in Alberta, the victims were not wearing seat belts. Canadian statistics show that 40 per cent of those killed and 20 per cent of those injured on Canada's roads do not use seat belts."

Target : 40 per cent reduction in the number of unbelted occupants who are killed or are seriously injured.

2. Impaired Driving: Under the Influence of Alcohol and Other Drugs

When alcohol is involved in a crash, the crash is likely to be more severe and involve fatalities. In 2004, 45.8 per cent of drinking drivers in casualty collisions were between the ages of 18 and 29, and most were males (Alberta Infrastructure and Transportation).

In 2001, the Traffic Injury Research Foundation of Ontario noted 38 per cent of drivers who had died in crashes and were tested had been drinking alcohol. Of these, almost 85 per cent had blood alcohol levels over the Criminal Code limit of 0.08 per cent. Drivers with high blood alcohol level represent about one per cent of the cars on the road at night and on weekends, but nearly half of all drivers killed at those times.

Across the globe, alcohol use is a contributing factor in one third of crashes resulting in death and serious injury. Problematic alcohol use is not limited to drivers, with pedestrians frequently identified as a party at fault in alcohol-related crashes. (Queensland, Australia).

Target: 40 per cent reduction in the number of road users who are killed or seriously injured in crashes involving drinking drivers

3. Speeding

According to Road Safety Vision 2010, crash data show that about 17 per cent of all road users killed annually were travelling at excessive speeds. Speeding reduces a driver's ability to negotiate curves or manoeuvre around obstacles in the roadway, extends the distance necessary for a vehicle to stop and increases the distance a vehicle travels when the driver reacts to a hazard (National Highway Traffic Safety Administration).

Speed also contributes to numerous crashes involving serious injury and increases the severity of crashes caused by other factors. While crashes are complex events, research has shown that exceeding the speed limit automatically increases the risk for the driver and any passengers, regardless of the road environment and speed of surrounding traffic. There is no such thing as safe speeding. Exceeding the speed limit or travelling at a speed inappropriate for the circumstances in any situation is potentially dangerous (Queensland, Australia).

Reducing speed is probably the most important method to reduce road trauma. It is also a very cost-effective measure. Current research suggests that as speed increases:

- Road users are less able to react to other road users' actions or detect hazards;
- Stopping distances increase and other manoeuvres become more difficult; and
- The severity of crash outcomes increases (Western Australia).

American studies have shown that an increase in mean speed of three to six km/hr by vehicles on the road network results in an increase in the number of deaths from 19 per cent to 34 per cent. A 10 per cent slowing reduces deaths by approximately 36 per cent (National Highway Traffic Safety Administration).

Target: 20 per cent reduction in the number of road users killed or seriously injured in speed-related crashes.

4. Intersections

Recent crash data show that approximately 25 per cent of road users died in collisions at intersections. Intersections on urban streets, where the speed limit is 60 km/hr or less, are particularly dangerous. Forty-seven per cent of all people killed and 57 per cent of those seriously injured in intersection crashes were injured or killed at intersections on urban streets (Road Safety Vision 2010).

Target: 20 per cent reduction in the number of road users killed or seriously injured in intersection-related crashes.

5. Rural Roadways

Rural roadways are located outside the corporate limits of a city, town or village. According to Alberta Infrastructure and Transportation, 80 per cent of all collisions occurred in urban areas and 20 per cent in rural Alberta. Seventy per cent of all fatal crashes occurred on rural roads.

Road users are 2.5 times more likely to die in a rural crash than in the city. According to Road Safety Vision 2010, almost half of all road users who are killed in crashes and approximately 40 per cent of those seriously injured are victims of collisions on undivided rural roadways, where the posted speed limits are 80 to 90 km/hr. Many of these fatalities involve alcohol, non-use of seatbelts and excessive speed.

The latest crash data show that more than half of all drivers killed in single vehicle crashes on rural roads were not wearing seat belts. Transport Canada's 2002 national survey of rural seatbelt use found particularly low usage levels among occupants of light trucks who were 25 years old or younger.

A vehicle encounter with a large elk or moose can result in serious injury or death. According to Alberta Infrastructure and Transportation, there were 12,609 crashes involving animals on Alberta roads in 2004, resulting in 403 injuries and six deaths.

Target: 40 per cent reduction in the number of road users killed or seriously injured in collisions on rural highways.

6. Commercial Vehicles

In 2004, 69 people were killed and 753 injured in collisions involving truck tractors/large commercial vehicles. Compared to drivers of other vehicles, drivers of truck tractors/large commercial vehicles were more likely to run off the road, but less likely to have consumed alcohol before the crash (Alberta Infrastructure and Transportation).

According to Alberta Human Resources and Employment, motor vehicle collisions are the leading cause of on-the-job fatalities, accounting for 30 per cent of industrial fatal and injury incidents. There were 45 work-related fatalities in 2003 due to motor vehicle collisions in Alberta, an increase of 55 per cent from 2002. There were 1,757 work-related injuries due to motor vehicle crashes that were serious enough for the person involved to be absent from work for one or more days.

On average, crashes involving commercial vehicles account for approximately 20 per cent of all traffic fatalities and 10 per cent of all serious injuries each year. The driver of the other vehicle is more often at fault in fatal crashes. However, in crashes involving serious injuries, commercial and non-commercial vehicle drivers are equally at fault (Road Safety Vision 2010).

Long hours of driving contribute to an increased risk of crashing for commercial drivers. In fact, studies have found that the crash risk for drivers of large commercial vehicles doubles after eight hours of driving.

Target: 20 per cent reduction in the number of road users killed or seriously injured in crashes involving commercial vehicles.

7. Young Drivers and Riders

> Young drivers and passengers make up approximately 5% of the licensed driver/rider population, but 10% of drivers who are killed and about 13% of those who are seriously injured.
>
> *- Transport Canada*

Young drivers and passengers are disproportionately involved in motor vehicle collisions resulting in fatalities, serious injuries and property damage. They are also least likely to use restraints. This is consistent with statements in Road Safety Vision 2010 that young drivers or riders, aged 16 to 19, are consistently over-represented in victim statistics. They make up approximately five per cent of the licensed driver/rider population but 10 per cent of drivers who are killed and about 13 per cent of those who are seriously injured.

A Queensland, Australia study reported that it takes young drivers and motorcycle riders approximately five years to develop a full complement of driving skills. Young drivers and motorcycle riders must develop their skills through graduated exposure to road use and learn to identify potential hazards in a constantly changing environment.

Target: 20 per cent reduction in the number of young drivers and riders killed or seriously injured in motor vehicle crashes.

8. Vulnerable Road Users

> The oldest victims (70 years and older) were most often struck at intersections, for example crossing against a red light. Pedestrians aged 70 or older were over three times more likely than the national average to be killed and almost twice as likely to be seriously injured.
>
> *- Transport Canada*

Vulnerable road users are defined by Transport Canada as pedestrians and riders of bicycles, motorcycles and mopeds.

The chance of a pedestrian being killed increases exponentially with speed. If the vehicle involved in a collision with a pedestrian is traveling 40 km/hour, the probability of pedestrian death is approximately 20 per cent. That percentage almost quadruples when a vehicle is traveling 60 km/hour, and death is virtually certain at speeds in excess of 80 km/hour (Alberta Motor Association).

Age is highly correlated to locations where pedestrians are killed or seriously injured. The youngest victims (less than nine years of age) were most often struck at non-intersection locations, for example when they dart out into traffic between parked vehicles. The oldest victims (70 years and older) were most often struck at intersections, for example when they cross against a red light. Pedestrians aged 70 or older were over three times more likely than the national average to be killed, and almost twice as likely to be seriously injured (Transport Canada).

Collectively, vulnerable road users account for approximately 20 per cent of traffic fatalities and serious injuries. Among pedestrians who are killed, older people (65 years or older) are over-represented. This age category of pedestrians is expected to increase considerably during the next 30 years. Among seriously injured pedestrians, young people (15 years or younger) are over-represented. Among those pedestrians killed, approximately 25 per cent had consumed alcohol before being struck, and most had blood alcohol levels greater than 0.08 per cent. The number of motorcyclists killed in crashes has increased by more than 25 per cent since 1996 (Road Safety Vision 2010).

Target: 20 per cent reduction in the number of pedestrians, motorcyclists and cyclists killed or seriously injured.

9. High Risk and Medically Unfit Drivers

Three to four per cent of drivers exhibit high risk driving behaviors. This includes not wearing seat belts, drinking and driving, driving at unsafe speeds and running red lights and stop signs. These high risk drivers account for about 12 per cent of fatalities and eight per cent of serious injuries (Traffic Injury Research Foundation).

The Canadian Council of Motor Transport Administrators defines high risk drivers as those who:

- Have been involved in three or more distinct events (a traffic violation, a Criminal Code offence or a reportable collision) within a two year period;
- Refuse to provide a breath sample;
- Have been convicted of a repeat offence, including driving while prohibited or disqualified (Road Safety Vision 2010).

As well, extensive literature shows that drivers who have diabetes, sleep disorders, organic brain disorders, mental illness, chronic physical illness and vision problems have a higher risk of collisions.

Target: 20 per cent reduction in the number of road users killed or seriously injured in crashes involving high risk drivers.

10. Aging Drivers

The fastest growing segment of licensed drivers is the age group 65 and older. Most drivers in this age group are highly competent, and have significant driving experience. Demographic changes are expected to result in large proportions of people over age 65 living in rural and suburban communities, where public transit is inefficient. Distances to shopping, medical services, family and friends require another form of transportation.

> Drivers age 75 and over have the second highest crash rate of any other age groups per kilometer driven, next to those 16 to 24 years of age.
>
> - Alberta Motor Association

Statistics show motor vehicle fatalities and serious injuries increase significantly after age 65. When the frequency and number of kilometers driven is taken into account, the crash rates of older drivers rise steadily after age 70. Drivers aged 75 and over have the second highest crash rate of any other age groups, next to those 16 to 24 years of age (Alberta Motor Association).

Target: (To be determined)

Strategies

Traffic safety professionals agree that to effectively change driver habits and reduce the number of collisions, we require a comprehensive traffic safety plan that includes many inter-connected strategic initiatives and the appropriate resources to carry out these strategies.

The Traffic Safety Plan builds on the Alberta Traffic Safety Initiative, which has been in place since 1996 (Appendix I). The plan recognizes that traffic safety issues can overlap and interventions in one area (e.g. high risk drivers) may result in meeting reduction targets in other areas (e.g. impaired driving, speeding, failure to use occupant restraint, etc.)

Leadership and Coordination

Collaboration among all traffic safety partners, combined with sustainable funding, is critical to the success of the Traffic Safety Plan.

- **Establish the Office of Traffic Safety**. The creation of the Office of Traffic Safety, a high profile area championed by Alberta Infrastructure and Transportation, will enhance collaboration among all traffic safety partners.

  The Office of Traffic Safety will coordinate the work of the 35 stakeholders who have contributed to the development of the Alberta Traffic Safety Plan, as well as others who may want to become involved. It will be closely linked to the departments of Solicitor General and Public Security, Justice and Attorney General, Health and Wellness and other provincial government departments. The Office will work closely with industry associations and government to address issues in the Traffic Safety Plan's target areas.

- **Establish strong partnerships** among law enforcement, education and engineering organizations to improve safety on the road and at intersections.

- **Combine all existing driver-related data** in a consolidated history report, allowing the identification of specific driving performance triggers (e.g. speeding convictions, impaired driving convictions and collisions.)

- **Strengthen the formal exchange of driver and vehicle-related data** among provincial and territorial jurisdictions.

- **Continue Alberta's ongoing involvement** in national and inter-provincial traffic safety initiatives, including the Canada National Safety Code and Canada Road Safety Vision 2010. As well, continue Alberta's commitment to ensuring drivers are fit and are regularly monitored.

- **Engage other road users** including emergency workers and tow truck operators, and road construction and maintenance crews in finding and implementing solutions for their specific work-related hazards.

- **Take a coordinated approach** to monitoring commercial carrier safety to identify carriers operating at a risk to the motoring public. This includes improving administrative tasks that allow for quicker identification of and responses to risky carriers.

- **Work with carrier industry stakeholders** to develop an enhanced safety partnership program in which carriers who adhere to a higher degree of safety are formally recognized and given greater latitude in meeting standard roadside inspections.

- **Work with Transport Canada** to ensure the commercial trucking industry is aware of and adherent to the new federal Hours of Service Regulation. The regulation requires drivers to get more daily rest in order to prevent collisions related to excessive driving time.

Communications and Advocacy

Targeted and extensive use of high quality advertising and social marketing messages is essential to underscore the importance of traffic safety from the societal cost and return on investment perspectives.

A strong communications and advocacy initiative will ensure consistency in messaging, cooperation in leveraging resources and filling gaps, and an increase in public profile and understanding of traffic safety challenges.

The Alberta government must work with the federal government and other provinces and territories to advocate for and support traffic safety initiatives.

- **Increase and better coordinate among stakeholders advertising and promotion** of traffic safety initiatives and volunteer programs.

- **Publicize enforcement operations** to increase the perceived risk of apprehension and raise awareness of traffic and commercial vehicle safety issues.

- **Improve communication and collaboration** with enforcement partners, including joint enforcement and selected enforcement, to improve commercial vehicle safety.

- **Raise awareness of commercial vehicle safety issues.** Publicize enforcement operations to increase the perceived risk of apprehension.

- **Implement a major communications campaign** prior to and during implementation of any legislative changes relating to traffic safety.

- **Mobilize the community to effect positive changes in road safety behaviour.** Community "buy-in" is a crucial element in improving traffic safety. Build on the successful Alberta Occupant Restraint Program model to mobilize communities in pursuit of the goals and targets set out in the 10 target areas.

Aboriginal Traffic Safety

According to the 2003 Aboriginal Traffic Safety Summit Report, in 2000, 75 per cent of motor vehicle fatalities involving First Nations people were unbelted, and the fatalities were five times more likely to involve alcohol. As well, Aboriginal people in Alberta continue to experience higher traffic-related injuries and fatalities than non-Aboriginal people. Nearly 16 per cent of all traffic-related deaths involve Aboriginal road users, yet Aboriginals represent approximately five per cent of Alberta's population.

- **Include an Aboriginal component** in traffic safety strategies.
- **Consult with key community leaders and elders** when implementing traffic safety strategies in Aboriginal communities.
- **Recruit, select and deploy** Traffic Safety Program Coordinators to work in consultation with leaders and elders in the Aboriginal community.

Education

Education is a critical component of the Alberta Traffic Safety Plan. Current activities will form an important baseline upon which to provide future educational opportunities to rural, urban and Aboriginal audiences.

Key audiences for traffic safety education include the following:

- Parents and caregivers of children up to 6 years old
- School-aged children, 7 to 15 years old
- Young road users and new drivers, 16 to 25 years old
- Drivers, 26 years and older
- Aging road users
- High risk drivers

- **Expand community education programs.** Positive changes in road safety behaviour occur at the community level. For example, expanding community programs and providing additional resources for the Alberta Occupant Restraint Program will help reach high-risk, non-compliant drivers and passengers and improve the rates of seat belt use from current levels. As well, develop community-based activities for young people outside of school.
- **Review driver examinations and driver education and training** on an ongoing basis.
- **Review licensing standards for all classes, including Motorcycle (Class 6).** Ensure all classes of licence and licensing endorsement programs are sufficient to address the complexities of driving.
- **When reviewing driver education and training,** ensure the programs instill a culture of road safety in their learners. Educate all road users on the consequences of unsafe driving.

- **Raise the overall standards of driver testing.** Implement an Automated Knowledge Testing System that will not only ensure the integrity of testing, but will also raise the standards. Mandate randomized testing.

- **Enhance safety and training for young drivers** through ongoing enhancements to the Graduated Drivers Licence program.

- **Expand the use and availability of traffic safety educational materials** for parents and caregivers of young children.

- **Develop new learner resources that address traffic safety across the school grades,** including interactive CDs, Internet websites, and experiential simulators, as well as evaluation processes.

- **Work with the Transportation Training and Development Association** to deliver a training and commercial driver certification program.

Enforcement

Significant increases in law enforcement personnel, particularly those dedicated to traffic safety, are needed to successfully address the Traffic Safety Plan targets. This includes providing enforcement services in Aboriginal communities. Expanded emphasis on enforcement will help ensure compliance with existing legislation and provide general deterrence for drivers and road users who may otherwise choose to ignore traffic safety laws.

With additional resources for traffic law enforcement, appropriate accountability must be in place for the use of those new resources to reduce collisions, injuries and fatalities, along with a model of sustainable, evidence-based and intelligence-led enforcement.

Additional automated enforcement measures will also be considered to *supplement* existing and additional police resources. Regulations, policies and procedures will be developed for their use.

Increased enforcement will result in workload implications in the "downstream" criminal justice system – if there is more enforcement, there will be more demands placed on our court system.

- **Increase resources for enforcement.** For example, despite decades of social message campaigns, greater enforcement, and criminal sanctions, impaired driving rates remain unacceptable. A significant increase in enforcement resources is necessary to heighten the general deterrence for the drinking and driving population. This also includes introducing additional police resources to address issues such as speeding.

- **Target specific offenders, offences and locations.** Identify chronic high risk drivers based on empirical indicators and a weighted index. Target drivers who are committing specific offences such as racing, impaired driving, and non-compliance with court ordered driving prohibitions, or prohibitions through the Alberta Administrative Licence Suspension program. Identify locations where a disproportionately high number of offences are suspected, such as establishments that serve alcohol.

- **Improve administration and develop systems** to better track and apprehend repeat high risk drivers.

- **Review the roles and responsibilities** to ensure the Transportation Safety Board is as effective as it can be. The literature appears to suggest that many, perhaps even a majority, of suspended drivers continue to drive. These high risk drivers are beyond sanctions until apprehended and convicted.

- **Improve commercial vehicle enforcement.** Expand commercial vehicle enforcement authority including targeting dangerous moving violations; increasing seatbelt usage; and enforcing driver hours of services rules, improved cargo securement and other measures.

- **Develop and use thermal imaging** to more effectively screen and inspect commercial vehicles. Through this infrared technology, an inspector can scan a commercial vehicle's wheels with a camera, and a screen will display thermal images of the wheels. The colour image helps the operator easily identify a vehicle with functional or inoperative brakes.

Legislation

As the Alberta Traffic Safety Plan moves forward, new legislation will be considered and will be formulated based on research and best practice. These will pertain to targeted areas including occupant restraints, impaired driving, speeding, intersections, rural roadways, commercial vehicles, young drivers and riders, vulnerable road users, high risk drivers and aging drivers.

Research and Evaluation

All strategies in the Traffic Safety Plan will be evaluated on an ongoing basis to assess and understand what works, what does not, and what needs to be changed to be successful. Targeted research will allow Alberta to tailor its strategies and interventions over time to increase their effectiveness. Alberta will continue to track, adapt and utilize relevant research and best practices, and to share its innovations, research and "lessons learned" with other jurisdictions.

- **Create a solid framework and scorecard**. This includes developing a well-resourced research and evaluation structure in the Office of Traffic Safety, with components related to the funding of project priorities, project management, policies and procedures, contract management, utilization of research and evaluation, special areas such as Aboriginal traffic safety, and knowledge management. The Provincial Auditor General will perform an evaluation of the Office of Traffic Safety during its initial years.

- **Develop baseline and ongoing Traffic Safety Plan measures**. The measures will include performance indicators for each of the target areas, the number of total collisions, societal costs, and surveys or measures of public perception.

- **Enhance the collection and use of traffic safety data.** For example, fully implementing and expanding the Traffic Safety Data Collection Project will automate the collection of traffic safety data at the scene of an event. An officer will swipe the driver's licence or complete a search against the motor vehicle database and have immediate access to the information on the drivers and vehicles. Once possible, this will improve the accuracy and timeliness of information.

- **Research new ways to undertake engineering safety improvements throughout the province.** This includes identifying highway sections serving larger volumes of commuter traffic (urban satellite communities to large cities) for roadway lighting; evaluating and installing appropriate and consistent pedestrian crossing controls, and identifying specific locations where a disproportionately high number of collisions occur.

Engineering and Infrastructure

Improving engineering and infrastructure will help meet Traffic Safety Plan targets. These include initiatives to address problems with rural highways and intersections as well as measures to address vulnerable road users. Priority will be placed on improvements that yield the most positive results in terms of saving lives and making Alberta's roads safer for all users.

Initiatives to improve engineering and infrastructure are designed to optimize safety effects at a manageable cost by using sophisticated analysis tools and examining and implementing standards, practices, guidelines and policies to maximize the outcomes. High crash locations throughout the province are assigned a higher priority for subsequent road maintenance and engineering improvements.

High crash locations throughout the province are assigned a higher priority for subsequent road maintenance and engineering improvements.

- **Maintain government's commitment to ongoing road safety audits and in-service road safety reviews.** These two safety engineering tools help reduce roadway crashes and fatalities by detecting and correcting potential safety deficiencies in new road/bridge projects before traffic is allowed on, and at existing road/bridge infrastructure that is already carrying public traffic.

- **Undertake engineering safety improvements at highway intersections throughout the province.** Given that up to 50 per cent of all collisions are intersection-related, improvements will significantly reduce collision rates and severity.

- **Provide more rest stops** in rural settings along provincial highway routes.

- **Initiate five-year programs** to install shoulder and centre-line rumble strips on paved high speed (80 km/hour or higher) highways and municipal roads.

- **Enhance pavement markings** on high-volume, multi-lane and two-lane highways and all bridge sites; improve the appearance of warning signs by using fluorescent yellow material; and improve roadway lighting on sections of highway serving larger volumes of traffic.

- **Use "Intelligent Transportation Systems" to help reduce collisions**. These systems include advanced traveler information, traffic management and road weather information systems. Traveler information and traffic management systems provide travelers with real time updates on traffic incidents, road conditions and construction events. This can assist travelers in avoiding congested areas and reduce the opportunity for collisions. Road weather information systems provide accurate real-time road weather condition data, resulting in enhanced winter maintenance and reduced winter-related crashes.

- **Continue to enhance the "Black Spot" program.** Alberta's "Black Spot" Program monitors locations on the road and identifies areas that have high rates of collisions and patterns of similar collisions. This system makes it possible to compare the frequency and severity of collisions, collision trends and the average costs to society for each site. The "Black Spot" program is used to identify locations where physical changes to infrastructure can enhance road safety. In many cases these physical changes will be delivered through the regular capital program following normal programming processes. In some instances safety may be enhanced through improvements to signing, pavement markings, lighting or minor geometric improvements, in which case these improvements may be undertaken in a very timely manner using the "Black Spot" program funding.

Conclusion

The Alberta Traffic Safety Plan represents the unprecedented combined efforts of stakeholder groups and government departments, united to address the individual, community and societal implications of the almost 400 *preventable* fatalities and 27,000 injuries every year.

The provincial government and stakeholders have an abiding interest in reducing the estimated $4 billion annual cost of motor vehicle collisions. **If the Alberta Traffic Safety Plan reaches its targets, the estimated annual savings in casualty crashes (not including property damage) is $1.1 billion.**

More important than dollars saved, however, is the number of injuries and fatalities that can be prevented. Implementing a prevention strategy in Alberta would mean 789 fewer hospitalizations, 1500 fewer injuries treated outside a hospital setting and about 180 fewer injuries leading to permanent disability.

To achieve these savings and the targets outlined in this plan, we are aiming our strategies at the following 10 target areas:

1. Unbelted occupants and occupant restraints
2. Impaired driving
3. Speeding
4. Intersections
5. Rural roadways
6. Commercial vehicles
7. Young drivers and riders
8. Vulnerable road users
9. High risk and medically unfit drivers
10. Aging Drivers

The implementation of the Alberta Traffic Safety Plan will see the plan's strategies put into action. Many of the strategies overlap and many will work in conjunction with other strategies. The strategic initiatives in the plan fall under eight main categories:

1. Leadership and coordination
2. Communications and advocacy
3. Aboriginal traffic safety
4. Education
5. Enforcement
6. Legislation
7. Research and evaluation
8. Engineering and infrastructure

The Alberta Traffic Safety Plan is taking action on traffic safety and the results of these strategies will bring considerable savings to Albertans. Not only will improved traffic safety save costs in terms of money spent in areas such as health care and the judicial system, but it will save lives and substantially reduce the human, community and societal burden caused by traffic collisions.

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Appendix I: Components of the Traffic Safety Initiative

The Traffic Safety Initiative targets four key areas:

1. **Information/Awareness**
2. **Education**
3. **Legislation and Standards**
4. **Enforcement**

The Traffic Safety Initiative's components include:

Alberta Occupant Restraint Program (approximately $225,000 was expended in fiscal 2005/2006 to promote safe occupant restraint practices)

This program has representation from Alberta Aboriginal Affairs and Northern Development, Alberta Infrastructure and Transportation, Solicitor General and Public Security, Health and Wellness, the Alberta Center for Injury Control and Research, the RCMP and other law enforcement agencies.

The Alberta Occupant Restraint Program is intended to reduce injuries and trauma due to the non-use or misuse of occupant restraints and child safety seats. The program began in 1995 with child restraints, and was expanded in 1999 to include adult occupant restraints. Annual evaluations ensure the program remains on target with provincial and national goals and objectives. Links to research and surveys, such as the Rural Alberta Seat Belt Survey, are maintained to ensure measurable outcomes are recorded and used for annual planning.

The program's goal is to achieve a provincial seat belt wearing rate of 95 per cent by 2010. The objectives are twofold, to increase:

(i) Rural rates from 69.5 per cent, versus the 1999 Alberta Rural Seat Belt Survey; and
(ii) Urban rates from 89 per cent, versus the 1999 Transfer Canada Survey.

Because of significant efforts in the past several years, the 2004 seat belt *rural* wear rates are at 82.4 per cent.

Alberta Provincial Impaired Driving Committee (approximately $600,000 was spent in fiscal 2005/2006 to address impaired driving)

This committee was formed to examine improved means for prevention and enforcement by:

- Developing and distributing awareness and educational programs, including support materials to various target audiences;
- Identifying provincial programs that promote education and enforcement;
- Developing implementation strategies for tougher impaired driving penalties and legislation.

A strategic planning session was held in 2001 with various provincial government departments, enforcement agencies and stakeholders. The result was a draft strategic plan approved by the participants, as well as the Provincial Impaired Driving Committee.

An "Impaired Driving Enforcement and Prosecution Strategic Plan" was then developed. This plan was amalgamated with the overall strategic plan for impaired driving. It is anticipated that this plan, once sanctioned by key government departments, could pave the way for a concerted effort.

> **Education and Community Awareness** (approximately $900,000 was spent in fiscal 2005/2006 to promote education and community awareness, and a further $300,000 on child traffic safety)

As part of the Traffic Safety Initiative, Alberta Infrastructure and Transportation continues to pursue numerous projects as follows:

Commercial Vehicles

- Professional Driver's Handbook
- Truck speed brochure
- Saferoads.com website: Truck (commercial vehicle) safety, Partners in Compliance, Air Brakes; Sharing the Road

Vehicle Leasing Program

- Vehicles leased by Alberta Infrastructure and Transportation assist police in Edmonton, Calgary and the RCMP to deliver safety programs

Helmet and Bicycle Safety

- "No helmet. No bike" brochure
- "Safe Cycling Checklist" brochure
- Bicycle Safety Committee
- Saferoads.com website: driving near bicycles; host a bicycle rodeo; safe cycling checklist; "Ride Right" safety videos

Motorcycle Safety

- "Live to Ride" motorcycle awareness brochure and safety posters
- Motorcycle Safety Committee
- Saferoads.com website: motorcycle checklist; motorcycle helmet information

Impaired Driving

- Provincial Impaired Driving Committee
- "Your number is up" impaired driving campaign posters and billboard campaign (Calgary, Edmonton, Medicine Hat, Lethbridge, and the RCMP)
- Postcard consequences (" Dan thought about going to college...")
- Joint Forces Checkstops
- Radio and television commercials
- Saferoads.com website: Impaired driving enforcement, the Checkstop program; impaired driving facts; impaired driving statistics; designated driver; hosting safe parties

Child Traffic Safety

- Walk the Talk: bicyclist; in-line skater; skateboarder; pedestrian; school bus rider; planning a "Walk the Talk" event
- Kinetic Kids Workbook: Grades kindergarten to 1, 2 to 3, and 4 to 6
- Saferoads.com website; Just for Kids (grades kindergarten to 3); grades 4 to 6; tips for educators

Child Safety Car Seats

- Part of the Alberta Occupant Restraint Program Steering Committee
- Child Safety Seat brochure
- Instructors for St. John Ambulance Child Restraint Systems program
- Instruction to police, fire, emergency, health and retail personnel
- Assistance in local/regional child seat inspection clinics
- Assistance to police in child restraint enforcement programs

Occupant Restraints

- Alberta Occupant Restraint Program manual, media kit and posters
- Radio commercials
- Saferoads.com website: radio spots; child safety seat brochure; seat belts

School Bus Safety

- School bus safety committee
- Safety tips bookmark
- School Bus Safety Rules brochure
- School Bus Driver's Guide (handbook)
- School Bus Driver's Checklist (booklet)
- School Bus Driver Improvement Program ("S" endorsement program)
- Saferoads.com website: inspections; facts

Off-Highway Vehicles

- Safety Goes a Long Way - pocket guide to snowmobile safety
- All Terrain Vehicle brochure
- Snowmobile safety task group
- Saferoads.com website: snowmobile fact sheet; code of ethics; snowmobiling hand signals; sledding in emergency situations; snowmobiling and the law; towing your sled; snowmobile safety guide

General Traffic Safety

- Basic Drivers' Licence Handbook
- Professional Drivers' Handbook
- Motorcycle Riders' Handbook
- Geared to Go - A Workbook for Coaching New Drivers
- Collision Prime Time radio spots
- Saferoad Reminders brochure
- New Rules for New Riders brochure
- Links with other jurisdictions through the Canadian Council of Motor Transport Administrators/Road Safety Vision 2010
- Saferoads.com website: graduated driver licensing, road construction safety, rules of the road, visitors driving in Canada, enforcement, driving on winter roads, recreational vehicles, and written-off or salvaged vehicles

Appendix II: Alberta and Canada Road Safety Vision 2010 – Target vs. Actual

	ALBERTA				CANADA**			
	Baseline 1996-2001	Actual 2002	Actual 2003	Target 2008-2010	Baseline 1996-2001	Actual 2002	Actual 2003	Target 2008-2010
30% reduction in fatalities	387	372	385	271	2966	2930		2076
30% reduction in serious injuries	2936	3462	3151	2056	18246	17830		12772
SUB TARGETS (Please note the following sub targets overlap and figures should not be added together.)								
40% reduction-unbelted occupant fatalities*	118	104	100	71	896.8	852		538.1
40% reduction-unbelted occupant serious injuries*	566	494	463	340	2446	2089		1467.6
20% reduction-# road users killed in speed related crashes*	95	88	120	76	609	666		487.3
20% reduction-# road users seriously injured in speed related crashes*	598	717	651	478	2413	2448		1930.4
20% reduction-# road users killed in intersection related crashes*	82	83	71	66	894.1	892.5		715.3
20% reduction-#f road users seriously injured in intersection related crashes*	846	1059	862	677	7855.5	7466		6284.4
20% reduction-# road users killed in crashes involving commercial*** vehicles	93	76	105	74	581.3	582		465.1
20% reduction-# road users seriously injured in crashes involving commercial vehicles	349	414	416	279	1689.7	1686		1351.7
20% reduction-# young drivers/riders (motorcyclists) killed	24	21	29	19	161	148		128.8
20% reduction-# young drivers/riders (motorcyclists) seriously injured	213	248	197	170	925.5	906		740.4
40% reduction-# road users killed on rural roadways*	294	273	269	177	1421.1	1410.1		852.7
40% reduction-# road users seriously injured on rural roadways*	1623	1777	1631	974	6595.4	6181.7		3957.2
30% reduction-# vulnerable road users killed	57	70	53	40	613	603		429.1
30% reduction-# vulnerable road users seriously injured	439	455	512	307	3628.2	3301.6		2539.7
40% reduction-# road users killed in crashes involving drinking drivers	107	91	111	65	N/A	N/A		N/A
40% reduction-# road users seriously injured in crashes involving d.d.	619	627	550	372	N/A	N/A		N/A
Total Collisions	98650	116308	113357	N/A	N/A	N/A		N/A

Notes: Alberta defines serious injury as a major injury – Persons with injuries or complaint of pain that went to the hospital and were subsequently admitted even if for observation only.
Figures for high risk drivers and for aging drivers have yet to be determined and will be added in the future.

*Please note that methodology used to derive these figures is different from that used by Transport Canada and will require further discussion to resolve.

** Source: Progress Toward the Targets of Road Safety Vision 2010, Presentation to CCMTA RSRP Standing Committee, November 1, 2004.

*** For the purpose of this report, commercial vehicles include trucks 4500 kg+, truck tractors, school, city and intercity buses.

Alberta Infrastructure and Transportation Driver Safety, Research and TSI
March, 2005